QIBA CT Volumetry Biomarker Ctte (BC) Call

28 March 2016 at 11 AM CT

Draft Call Summary

In attendance:

Jenifer Siegelman, MD, MPH (Co-Chair)
Ehsan Samei, PhD (Co-Chair)
Andrew Buckler, MS
Heang-Ping Chan, PhD
Vadivel Devaraju, PhD
Charles Fenimore, PhD
Marios Gavrielides, PhD
David Gustafson, PhD
Lubomir Hadjiiski, PhD
Hyun Grace Kim, PhD
James Mulshine, MD
Michael O'Connor, PhD
Kevin O'Donnell, MASc
Eric Perlman, MD
Aria Pezeshk, PhD
Marthony Robins, PhD
Lawrence Schwartz, MD
Ying Tang, PhD

RSNA:
Joe Koudelik
Julie Lisiecki

Pilot Study of Recorded WebEx Calls Begins with 3/28 call

- CT Volumetry BC calls have been selected for pilot recordings of QIBA WebEx calls; no objections were raised by the CT Vol BC call participants
- Recordings will be made available for 30 days , after which they will be deleted

State of the Profile (Mr. O'Donnell)

- Latest Profile updates:
  - Periodic Quality Assurance (QA) activities and physicist member recommendations were added to Section 3
  - The focus is on necessary details and utilizing manufacturer protocols for accurate device calibration
  - Actor responsibilities have been assigned; split among clinicians, physicists and technicians/sites
- Image acquisition and reconstruction protocols:
  - Radiologists determine specific protocols and technicians are responsible for following those protocols precisely and documenting their procedures
- Algorithm types and related iterative reconstruction kernels:
  - The same algorithm and reconstruction kernels must be used at both time points – for acquisition and reconstruction
  - It is acceptable to use scanners from different manufacturers, along with different models
    - *Algorithm reconstruction must be selected from these 3 choices only*:
      1. model-based iterative
      2. statistical iterative
      3. filtered back-projection (FBP)
  - Reconstruction kernels must remain consistent at each time point throughout; implementers are encouraged to use kernels suitable for the anatomic region and tissue imaged
  - Extreme care must be taken when iterative reconstruction methods are used
- Remaining section: Dr. Kim agreed to follow up offline with Dr. Goldmacher to provide asymmetric values
- Completion of the Profile is projected for early April 2016; Mr. O'Donnell agreed to provide a status update on the next call

Continuing discussion

- BC Leadership and project Principal Investigators will discuss Profile updates at the QIBA Annual Meeting in April
  - If possible, Dr. Kim will join the breakout session by teleconference
- Lesion texture, morphology, and how lesion volume is affected by noise or noise texture were discussed
- Quantification of noise magnitude may be possible, but not for noise texture. Further discussion is needed.

Action items: Mr. O'Donnell to continue updating the Profile for BC members' comment and review

Reminders:

- Call for abstracts for RSNA 2016 – Deadline is Wednesday, April 13th, by noon CT
- Call for next round of QIBA-funded project proposals – due to qiba@rsna.org by April 15th

Next Call: Monday, April 4 at 11 am CT | 2016 planning | Profile review| Next steps

- Review of numbers within Table 1 of the Profile
- **Expertise needed:** Mr. O'Donnell, Mr. Buckler, and Drs. Kim and Obuchowski
  - Dr. Kim to follow up offline regarding asymmetrical values